Rworksheet_cadiz#1

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##1. Set up a vector named age, consisting of 34, 28, 22, 36, 27, 18, 52, 39, 42, 29, 35, 31, 27, 22, 37, 34, 19, 20, 57, 49, 50, 37, 46, 25, 17, 37, 42, 53, 41, 51, 35, 24, 33, 41.

```
age <- c(34, 28, 22, 36, 27, 18, 52, 39, 42, 29, 35, 31, 27, 22, 37, 34, 19, 20, 57, 49, 50,
         37, 46, 25, 17, 37, 42, 53, 41, 51, 35, 24, 33, 41)
```

a. How many data points?

```
length (age)
```

```
## [1] 34
```

b. Write the R code and its output

```
age <- c(34, 28, 22, 36, 27, 18, 52, 39, 42, 29, 35, 31, 27, 22, 37, 34, 19, 20, 57, 49, 50, 37,
         46, 25, 17, 37, 42, 53, 41, 51, 35, 24, 33, 41)
print(age)
```

```
##  [1] 34 28 22 36 27 18 52 39 42 29 35 31 27 22 37 34 19 20 57 49 50 37 46 25 17
## [26] 37 42 53 41 51 35 24 33 41
```

##2. Find the reciprocal of the value for age.

```
reciprocal <- 1 / age
library("MASS")
fractions(reciprocal)
```

```
##  [1] 1/34 1/28 1/22 1/36 1/27 1/18 1/52 1/39 1/42 1/29 1/35 1/31 1/27 1/22 1/37
## [16] 1/34 1/19 1/20 1/57 1/49 1/50 1/37 1/46 1/25 1/17 1/37 1/42 1/53 1/41 1/51
## [31] 1/35 1/24 1/33 1/41
```

Write the R code and its output age <- 1/age

```
reciprocal <-1 / age
library("MASS")
fractions(reciprocal)
```

```
##  [1] 1/34 1/28 1/22 1/36 1/27 1/18 1/52 1/39 1/42 1/29 1/35 1/31 1/27 1/22 1/37
## [16] 1/34 1/19 1/20 1/57 1/49 1/50 1/37 1/46 1/25 1/17 1/37 1/42 1/53 1/41 1/51
## [31] 1/35 1/24 1/33 1/41
```

##3. Assign also new_age <- c(age, 0, age)

```
new_age <- c(age,0,age)
print(new_age)
```

```
##  [1] 34 28 22 36 27 18 52 39 42 29 35 31 27 22 37 34 19 20 57 49 50 37 46 25 17
## [26] 37 42 53 41 51 35 24 33 41  0 34 28 22 36 27 18 52 39 42 29 35 31 27 22 37
## [51] 34 19 20 57 49 50 37 46 25 17 37 42 53 41 51 35 24 33 41
```

What happen to the new_age? - It happened that the new printed age is has a 0 separator and prints the value which explains the code of vector c(age,0,age)

4. Sort thge values of age.

Write the R code and its output.

```
sort(age)
```

```
##  [1] 17 18 19 20 22 22 24 25 27 27 28 29 31 33 34 34 35 35 36 37 37 37 39 41 41
## [26] 42 42 46 49 50 51 52 53 57
```

##5. Find the minimum and maximum value for age.

Write the R code for minimum

```
min(age)
```

```
## [1] 17
```

Write the R code for maximum

```
max(age)
```

```
## [1] 57
```

6. Set up a vector named data, consisting of 2.4, 2.8, 2.1, 2.5, 2.4, 2.2, 2.5, 2.3, 2.5,2.3, 2.4, and 2.7

```
data1 <- c(2.4, 2.8, 2.1, 2.5, 2.4, 2.2, 2.5, 2.3, 2.5, 2.3, 2.4, 2.7)
```

#a. How many data points

```
length(data)
```

```
## [1] 1
```

#b. Write the R code and its output

```
data1 <- c(2.4, 2.8, 2.1, 2.5, 2.4, 2.2, 2.5, 2.3, 2.5, 2.3, 2.4, 2.7)
```

#7. Generates a new vector for data where you double every value of the data. | What happen to the data?

```
data1 <- data1 * 2
print(data1)
```

```
##  [1] 4.8 5.6 4.2 5.0 4.8 4.4 5.0 4.6 5.0 4.6 4.8 5.4
```

#8. Generate a sequence for the following senario:

#8.1 Integers from 1 to 100.

```
sequence <- seq(1,100)
print(sequence)
```

```
##   [1]   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18
##  [19]  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36
##  [37]  37  38  39  40  41  42  43  44  45  46  47  48  49  50  51  52  53  54
##  [55]  55  56  57  58  59  60  61  62  63  64  65  66  67  68  69  70  71  72
##  [73]  73  74  75  76  77  78  79  80  81  82  83  84  85  86  87  88  89  90
##  [91]  91  92  93  94  95  96  97  98  99 100
```

#8.2 Numbers from 20 to 60

```
squence <- seq(20,60)
squence
```

```
##  [1] 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44
## [26] 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60
```

#8.2